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ASPJ as a Dominant Cyberspace Operation and Introduction of the Latest *Chronicles Online* Journal Articles

THE MISSION OF the United States Air Force is to deliver sovereign operations for the defense of the United States of America and its global interests—to fly and fight in Air, Space, and Cyberspace.” This new mission statement retains the service’s traditional emphasis on air and space operations, while the new reference to cyberspace reflects the growing importance of the informational domain.

Air and Space Power Journal (ASPJ), the professional journal of the United States Air Force, has deep cyberspace roots. Originally known as the *Air University Quarterly Review*, the journal has undergone several name changes over the years. Beginning publication in early 1947, months before the Air Force became a separate service, the journal existed only in printed form until the 1990s, when it established a cyberspace presence by posting new quarterly issues online. To expand their Internet outreach, the journal’s staff members soon began scanning and posting back issues online. All of the English issues of *Air and Space Power Journal*, *Aerospace Power Journal*, and *Airpower Journal* dating back to 1987 are available at <http://www.airpower.maxwell.af.mil/airchronicles/back.htm>. *Air University Review* issues from the late 1960s to early 1987 are available at <http://www.airpower.maxwell.af.mil/airchronicles/aureview/aureview.html>. Many Spanish and Portuguese *ASPJ* issues published since 1949 are also available online, as are all issues of the Arabic and French *ASPJs*, which

appeared in 2005. Researchers now have instant access to thousands of articles in five languages. Eventually all back issues will be online.

E-mail now helps serve *ASPJ*’s global audience. Free e-mail subscriptions available at <http://www.af.mil/subscribe> instantly deliver new quarterly issues. The English *ASPJ* e-mail service, launched in 2003, has over 8,000 subscribers. Nearly 2,000 have joined the Spanish e-mail service, begun in 2004, and hundreds have joined the French one, begun in early 2006.

Today, *ASPJ* has an impressive cyberspace presence. The *ASPJ* Web site receives over 1,000,000 hits per month, dominating discourse about airpower and space power on the Internet. Try this simple demonstration: go to <http://www.google.com>, and search the term *air power*. The *ASPJ* Web site will be at the top of the list of several hundred million search results. A search for *space power* yields similar results. Clearly, *ASPJ* is a dominant cyberspace operation.

All *ASPJ* editions promote professional dialogue among Airmen worldwide so that we can harness the best ideas about airpower and space power. *Chronicles Online Journal (COJ)* complements the printed editions of *ASPJ* but appears only in electronic form. Not subject to any fixed publication schedule, *COJ* can publish timely articles anytime about a broad range of topics, including historical, political, or technical matters. It also includes articles too lengthy for inclusion in the printed journals.

Articles appearing in *COJ* are frequently republished elsewhere. The Spanish, Portuguese, Arabic, and French editions of *ASPJ*, for example, routinely translate and print them. Book editors from around the world select them as book chapters, and college professors use them in the classroom. We are pleased to present the following recent *COJ* articles (available at <http://www.airpower.maxwell.af.mil/airchronicles/cc.html>):

- Maj Clifford M. Gyves's "Getting inside the Enemy's Head: The Case for Counteranalysis in Iraqi Counterinsurgency Operations" (<http://www.airpower.maxwell.af.mil/airchronicles/cc/gyves.html>) and

- Col Stephen R. Schwalbe's "Organizational Institutionalization of BRAC" (<http://www.airpower.maxwell.af.mil/airchronicles/cc/schwalbe4.html>)

The *ASPJ* editorial staff always seeks insightful articles and book reviews from anywhere in the world. We offer both hard-copy and electronic-publication opportunities in five languages, as noted above. To submit an article in any of our languages, please refer to the submission guidelines at <http://www.airpower.maxwell.af.mil/airchronicles/howto1.html>. To write a book review, please see the guidelines at <http://www.airpower.maxwell.af.mil/airchronicles/bookrev/bkrevguide.html>. □



Ricochets and Replies

We encourage you to send your comments to us, preferably via e-mail, at aspj@maxwell.af.mil. You may also send letters to the Editor, Air and Space Power Journal, 401 Chennault Circle, Maxwell AFB AL 36112-6428. We reserve the right to edit the material for overall length.

ASPJ E-MAIL SUBSCRIPTION

I recently signed up for an e-mail subscription to *Air and Space Power Journal*, and the spring 2006 issue is my first. What an excellent magazine! There are few professional journals that I sit and read from cover to cover, but that is exactly what I have done this morning. I compliment you and your staff on your thoroughly professional publication. The journal contains some great articles, but the most important quality I've noticed is the wide variation of views on subjects, which is important because the more perspectives a person can get, the better decisions one can make. Making effective decisions is a large part of leadership. The topic of leadership is important to me because when I was an E-4 in the US Air Force, I was privileged to serve under some of the best leaders I have ever met. Imagine having a colonel tell you, "Mike, just tell me what you

need, and we'll make it happen." You can't ask for more than that. Great job on the journal. Keep up the good work.

Michael P. Kopack
Raleigh, North Carolina

FIVE PROPOSITIONS REGARDING EFFECTS-BASED OPERATIONS

I read Col Steven Carey and Col Robyn Read's article "Five Propositions Regarding Effects-Based Operations" (spring 2006) with interest. I find proposition number two the least compelling of the five. True enough, coalition involvement is critically important to the legitimacy of any military operation, but its connection to effects-based operations (EBO) is less self-evident. Proposition number one stipulates that all military operations should be effects based. I would think that that would naturally include coalition operations as well.

The following points that Colonel Carey and Colonel Read make in their article seem most important and merit further emphasis:

- EBO is, first and foremost, a mind-set.
- EBO is not about inputs (bombs delivered or targets “serviced”) but about desired outcomes.
- Attempts to overmechanize EBO will guarantee that its promise will never be fully realized.
- EBO is what ties tactical actions to strategic results.
- EBO is the means for ensuring that operations and goals are relevant.
- EBO is better thought of as an organizing construct than as an approach to targeting.
- EBO depends on good intelligence and understanding of the enemy.
- EBO is, as often as not, primarily about second-order rather than first-order effects.

Regarding the reference to the two bridges attacked during Operation Allied Force, the second bridge is a valid example of the point the authors are trying to make, but I’m not so sure if the first bridge is. The fact that the train appeared only after weapon release was a phenomenal stroke of bad luck for everyone involved and most definitely produced undesirable consequences. But it does not, in and of itself, mean that the bridge was not a legitimate target for the effect being sought.

Dr. Benjamin S. Lambeth
Santa Monica, California

EDUCATING FOR EXEMPLARY CONDUCT

I must admit that as I began reading Dr. James Toner’s article “Educating for ‘Exemplary Conduct’” (spring 2006), I thought I was being treated to a history lesson, but I was subsequently delighted to find myself immersed in historical continuity of the sort that needs periodic reinforcement. Wonderful article! Timely!

Truly professional! The concept of an officer as a gentleman—the movie notwithstanding—is something I grew up with. My father graduated from the Virginia Military Institute in 1922, and I graduated from the US Military Academy (West Point) in 1963. I am now on the verge of reengaging with the officer-as-a-gentleman concept. Here at the US Army War College’s Strategic Studies Institute, we are giving serious thought to establishing a Center for the Study of the Military Profession. We have been toying with the idea for about two years but have not had enough time or motivation to actually implement it. The time may now be upon us. To be perfectly frank, once our annual strategy conference is over, we’ll be searching for an opportunity to begin discussing who (institutionally) would be willing to participate in such a venture and better define the essential question “To do what?” Dr. Toner offers us a serious starting point for those discussions.

Prof. Douglas V. Johnson II
US Army War College, Carlisle, Pennsylvania

DEFINING THE PRECISION WEAPON IN EFFECTS-BASED TERMS

In his article “Defining the ‘Precision Weapon’ in Effects-Based Terms” (spring 2006), Maj Jack Sine is squarely on the mark with his closing observations: “Operational and tactical planners should thoroughly understand the desired effects and undesired effects associated with each of the weapons available for use. Tactical planners do not require a separate term to distinguish between a weapon with three-meter [circular error probable] and one with 10-meter CEP. Operational and tactical planners, however, do require the ability to associate a level of effectiveness to a particular weapon in a particular scenario” (p. 87). Speaking on the basis of more than 35 years of experience as a retired USAF regular and Reserve component and civilian targeteer with the Department of Defense, I wholeheartedly second his appraisal of both the problem and the solution.

Semantic corruption, ignorance of the interplay of fundamental concepts, the desire

for simplistic answers to complex questions, and failure to follow historically validated processes and methodologies for planning the application of capabilities have perennially deflected us from achieving the purposes embodied in Joint Publication 3-60, *Joint Doctrine for Targeting*, 17 January 2002. Further, they have hobbled efforts to improve the full range of tasks associated with formulating courses of action and assessing consequences of execution.

The “precision weapon” of choice is whatever weapon we employ in the tactical scenario that accomplishes our ultimate purposes at the strategic level of warfare. From that perspective, the requisite level of “precision” is defined not by whatever guidance technology happens to be built into any particular weapon but by the commander’s objectives, guidance, and intent that energizes and directs the targeting process. Thus, a volley of artillery projectiles, a high-power radio-frequency weapon, a leaflet drop, or a diplomatic demarche is just as likely to be as “precise” a weapon of choice in any hypothetical scenario as a Joint Direct Attack Munition or cruise missile—both of which might turn out to be precisely the *wrong* weapon to use in that same scenario.

The truth of the preceding has long been known and accepted by a small community of individuals, primarily those from various service communities who migrated into the targeting profession. It is encouraging to see them become the substance of wider discourse. And it is time to stop the silly semantic gymnastics wherein the invalid definition and application of terminology serve only to confuse issues rather than solve problems.

Col Calvin W. Hickey, USAFR, Retired
Warrenton, Virginia

MAHAN ON SPACE EDUCATION

I was very impressed with 1st Lt Brent Ziarnick’s article “Mahan on Space Education: A Historical Rebuke of a Modern Error” (winter 2005). Although an engineer by profession, I am also interested in politics and military history. I commend Lieutenant Ziarnick for reading and bringing to light lessons from past great

strategists; I also commend *Air and Space Power Journal* for publishing interesting, potentially controversial articles. A free flow of ideas is critical for maintaining a healthy officer corps, service, and nation.

Jeffrey A. Jessen
Edwards AFB, California

OIL, AMERICA, AND THE AIR FORCE

I wanted to extend my compliments to Col Richard Fullerton for his article “The Future: Oil, America, and the Air Force” (winter 2005). I work for US Southern Command, so as you can imagine, Venezuela is often on our minds. When Venezuela comes up, the next word is usually *oil*. Unfortunately some people display a great deal of fuzzy thinking and convoluted logic regarding this topic. When I recently asked Daniel Yergin, author of *The Prize: The Epic Quest for Oil, Money, and Power* and the guy who literally wrote the book on oil, about Venezuela’s intent to divert its oil to China at the expense of the United States, he replied, “That would beg economic logic.” Few people seem to understand that oil is a world commodity with a world price and that no one country can “embargo” the United States with any impact. As for energy independence, as Colonel Fullerton makes clear, we use oil because it is cheaper than other sources of energy. When it isn’t cheaper, we won’t use it anymore. Colonel Fullerton’s article clarifies the issue in language anyone can understand.

Lt Col Robert M. Levinson, USAF
Washington, DC

TECHNICAL EDUCATION FOR AIR FORCE SPACE PROFESSIONALS

Lt Col Raymond Staats and Maj Derek Abeyta’s article “Technical Education for Air Force Space Professionals” (winter 2005) offers interesting recommendations for Air Force Space Command’s (AFSPC) education initiatives for Air Force space professionals (official term: *credentialed space professionals* [CSP]). However, the article contains some inaccuracies regarding the Air Force Space Professional

Development Program, and the authors' recommendations to improve AFSPC's education efforts touch on several areas that AFSPC either considered during development of the Space Professional Development Program or had already implemented.

The authors' first recommendation cites the need for an AFSPC liaison with Air Education and Training Command and the Air Force Institute of Technology (AFIT) to address education concerns. They also note the need for AFSPC representation on the Space Professional Oversight Board and the Joint Space Academic Group. The Space Professional Oversight Board is a multiservice senior-officer forum, chaired by the undersecretary of the Air Force, that oversees space professional development across the Department of Defense. AFSPC's vice-commander is a standing member of the Space Professional Oversight Board, and other AFSPC general officers and members of the Space Professional Management Office routinely attend the Space Professional Oversight Board's biannual meetings. The Joint Space Academic Group is an academic body made up of AFIT, Naval Postgraduate School, and Army representatives. Although AFSPC members periodically attend Joint Space Academic Group meetings as observers, the command's primary input to the Joint Space Academic Group is through the Space Professional Oversight Board. Since AFSPC can address issues to the Joint Space Academic Group (and, therefore, AFIT) through the Space Professional Oversight Board, a liaison position seems unnecessary.

In their second recommendation, the authors call for a phased approach to establish a technical undergraduate degree requirement for CSPs by 2010. In 2005 AFSPC conducted an educational-needs assessment for CSP officers via interviews of senior space leaders and a follow-up survey of company-grade officers. This led to the conceptual framework for initial and advanced space-focused academic-certificate programs that will bolster the technical knowledge of the CSP community. Most senior space leaders felt that a change in accession requirements was unnecessary. The goal is to develop CSP technical credentials

via individual courses and certificates as well as degrees. The results of this effort were forwarded to AFIT, the Naval Postgraduate School, and the Space Education Consortium to encourage certificate program development, which is under way. The Space Education Consortium, with the University of Colorado at Colorado Springs as the lead university, currently consists of 12 institutions dedicated to the advancement of CSP space education and research. The Space Education Consortium will develop a series of articulation agreements and a Web site that will enhance CSP planning for courses, certificates, and degrees. The Space Education Consortium is also considering preparatory courses to enhance CSP qualification for AFIT and Naval Postgraduate School programs. The formation of the Space Education Consortium also addresses the authors' third recommendation: development of curricula for advanced space degrees at military and civilian universities, since part of the Space Education Consortium's charter is to do just that.

In their fourth recommendation, the authors call on the Air Force to reaffirm AFIT and the Naval Postgraduate School as the primary providers of CSP graduate education. This is addressed by a memorandum of understanding signed in 2005 by AFIT, the Naval Postgraduate School, and the Space Education Consortium. In this memorandum, the signatories agree to ongoing communication to enhance their ability to provide space-related education to the national security space community. The memorandum further recognizes that AFIT and the Naval Postgraduate School will focus primarily on full-time education of military personnel, while the Space Education Consortium will focus primarily on part-time and off-duty education for military and civilian personnel. In this way, opportunities for space-related education for the CSP community are broadened and enhanced.

The fifth recommendation does not actually address space education but the composition of the CSP community, calling for addition of intelligence and logistics officers. Expansion of the CSP community is an appropriate next step, including the full spectrum of

those performing the space mission. In addition to intelligence and logistics, communications and weather specialties are also candidates. AFSPC's approach is to complete full development of the current CSP community before exploring broader membership since that community currently includes Total Force officer, enlisted, and civilian scientists; engineers; acquisition managers; and operators. Integration of the Reserve and Guard programs and development of the civilian segment are still under way. We welcome inputs from the military and academic communities that help us develop the cadre of space professionals the nation needs to deliver effective space capabilities to the war fighter.

Lt Col Thomas Peppard, USAF
Peterson AFB, Colorado

LORENZ ON LEADERSHIP

I am particularly interested in the article "Lorenz on Leadership" by (then) Maj Gen Stephen Lorenz (summer 2005) because he describes with examples and personal experiences the qualities a leader needs to have. I think he is humble yet assertive. I like his description of how leaders have to assure the well-being of their people by knowing how they feel and how they are doing. I find it delightful that he sees the "ego" as both a facilitator and a detriment. I think he writes from his own perception, and there is nothing better than getting advice from someone who knows what he's saying.

I enjoyed this article very much. However, I would add that to be a leader, there must be a balance between one's professional and personal lives. I find that many of my students here at Georgia Military College face two battles: one at work (deployment to conflict areas) and the other at home. It is becoming more difficult to find a middle ground between these battles, and the solution many times is to leave the military life.

I am a civilian who grew up in Colombia before coming to the United States, but it is my experience as an instructor of young military students that they are struggling to succeed

in a double-conflict life, in which staying focused at work is a challenge. I believe that leaders need to be focused at work to take care of their people, just as General Lorenz said.

Ana Maria Horst
Valdosta, Georgia

Editor's Note: Major General Lorenz was promoted to the rank of lieutenant general shortly after ASPJ published his article. "Lorenz on Leadership" is also available in Spanish at <http://www.airpower.maxwell.af.mil/apjinternational/apj-s/2005/3tri05/lorenz.html> and in Portuguese at <http://www.airpower.maxwell.af.mil/apjinternational/apj-p/2005/3tri05/lorenz.html>. Arabic and French versions are planned.

AIRPOWER, JOINTNESS, AND TRANSFORMATION

I enjoyed the article "Airpower, Jointness, and Transformation" by Dr. Stephen Fought and Col O. Scott Key (winter 2003). With all due respect to surface combatants, I think it properly elevates airpower to a superior position relative to other forces for two reasons. First, airpower transcends the defensive capabilities of even powerful navies and armies because of its sheer speed. Second, with the advent of airpower, neither a powerful navy nor an army can decide the outcome of a conflict without relying on airpower's capabilities. However, airpower—according to Giulio Douhet's theory—can by itself determine the outcome of a conflict.

Maj Jorge Napoleão, Angolan Air Force
Luanda, Angola

Editor's Note: Major Napoleão read the Portuguese version of Dr. Fought and Colonel Key's article, available at <http://www.airpower.maxwell.af.mil/apjinternational/apj-p/2004/2tri04/fought.html>.

INTRODUCING THE FRENCH ASPJ

Congratulations on welcoming an entirely new audience to the world's greatest—*Air and Space Power Journal*!

Brig Gen Randal D. Fullhart, USAF
Maxwell AFB, Alabama